

## SAME EMPIRE DIFFERENT EMPEROR

- The following note provides an overview of Empire Oil & Gas (ASX: EGO) which we rate as a HOLD. EGO has experienced a corporate upheaval over the past 12 months, with changes at both the Board and Management level, legal stoushes within the Company, with shareholders and a joint-venture partner, accompanied by cost and schedule overruns, commissioning issues at the Company's flagship Red Gully Gas and Condensate Processing Facility (Gas Plant) and a rapid decline from one of the production reservoirs.
- EGO is an exploration and production company with a focus on the onshore Perth and Carnarvon basins. The Company currently holds more than 20 permits across the two basins. EGO entered the rank of producers with the commissioning of the Gas Plant in the EP 389 permit in the Perth Basin.
- EGO is currently producing an average of c.8 Terajoule per day (TJ/d) of gas and c.360 barrels per day (bbls/d) of condensate from the Red Gully Project. All gas is currently being sold to Alcoa under Tranche-1 of the Gas Sales Agreement (GSA), as part of a \$25m pre-payment which helped fund the construction of the Gas Plant. All condensate is being sold to the BP Kwinana refinery. At present, this condensate revenue is EGO's only source of income which is just sufficient to cover both production and corporate costs. The Company has no capacity to fund future drilling, exploration or development programs.
- The new management has made significant progress in improving the Red Gully Project performance and is planning to recapitalise the Company in order to fund its exploration programme to unlock the value of its extensive Perth Basin holdings.
- On 1 September 2014, EGO entered into a transaction with its joint-venture partner ERM Power (ASX: ERM) whereby EGO agreed to buy all ERM's interests in several Perth Basin permits for \$15.1m funded via an interest-free loan from ERM. ERM has agreed to subsequently participate up to \$7.5m in a share placement and rights issue, if the transaction is approved by shareholders. EGO intends to undertake a rights issue at the same price as the placement to raise up to \$10m. After the transaction, EGO will become the largest acreage holder in the prospective Perth Basin, covering 12,000 km<sup>2</sup>. Subsequent to the successful completion of this transaction, EGO intends to secure high quality farm-in partners and investors to underpin an aggressive exploration strategy. The Company is also considering the possible sale of the Gas Plant and seeking to sell down part or all of its Carnarvon Basin interests to free up cash.
- On the exploration front, EGO has identified four drill-ready locations, including two prospects within a short tie-back distance of the Gas Plant, following a 3D Heli-seismic Survey that was conducted in April-June 2013. The 3D seismic was designed to delineate drilling prospects adjacent to the Gas Plant to provide additional gas and condensate reserves. If these prospects were drilled and produced in line with their resource estimates, they would significantly increase the economics of the Gas Plant and boost EGO's valuation. The Company plans to drill one of these targets within the next 18 months.
- Successful farm-outs and achieving a fair price for the Gas Plant may provide price catalysts in the interim. However, there is still significant uncertainty over the price which EGO will get for the Gas Plant and raising a full \$17.5m through placement and rights issues. We therefore initiate coverage with a Hold rating and a \$0.012/share price target.

25 November 2014

12mth Rating		HOLD
Price	A\$	0.005
Target Price	A\$	0.012
12m Total Return	%	140

RIC: EGO.AX		BBG: EGO AU
Shares o/s	m	6,294
Free Float	%	86.3
Market Cap.	A\$m	31.5
Net Debt (Cash)	A\$m	0.1
Net Debt/Equity	%	1%
3m Av. D. T'over	A\$m	0.05
52wk High/Low	A\$	0.02/0.01
2yr adj. beta		na

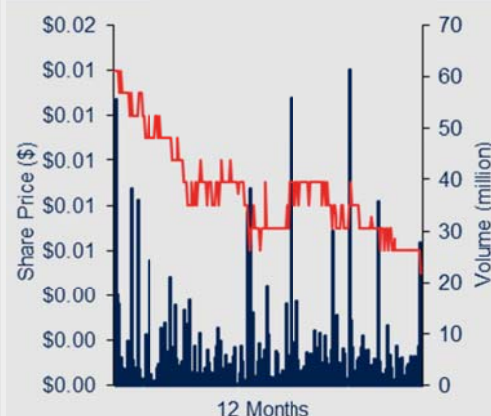
### Valuation:

Methodology		DCF
Value per share	A\$	0.012

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*Disclosure: An investment in this company should be considered speculative and note assumptions employed are contingent on broader market conditions remaining buoyant. These can change at short notice. Recommendations are current at the time of publication.*

### 12 Month Share Price Performance



Performance %	1mth	3mth	12mth
Absolute	-14.3	-33.3	-57.1
Rel. S&P/ASX 300	-11.9	-29.2	-55.5

## EMPIRE OIL AND GAS LIMITED (EGO)

Empire Oil & Gas (EGO) is an exploration and production company with a focus on the onshore Perth and Carnarvon basins. The Company currently holds more than 20 permits across the two basins and is poised to become the largest acreage holder in the prospective Perth Basin, covering 12,000 km<sup>2</sup>.

EGO made two back-to-back gas and condensate discoveries in its Perth Basin EP 389 joint-venture (EGO's net interest 76.39%) in 2009 and 2011, which it commercialised by building the Red Gully Processing Plant (Gas Plant) in 2012 and production commenced in late 2013. A Gas Sale Agreement (GSA) is in place for the sale of gas to Alcoa of Australia. Alcoa is purchasing 15 petajoules (PJ) of gas in two tranches and prepaid \$25m to the joint venture participants for the first tranche of the contract. The funds were used for the development of the Gas Plant, including a connecting pipeline to the Dampier to Bunbury natural gas pipeline. Alcoa will subsequently pay for gas delivered in respect of the second tranche, which constitutes the major part of the contract. EGO is expecting Tranche-1 to be delivered by the end of September 2015.

Recent interpretation of 3D seismic survey data, which was conducted in April-June 2013, has identified four highly prospective exploration targets near the Gas Plant. EGO plans to drill one of these targets within the next 18 months. EGO is also considering the possible sale of the Gas Plant to raise funds for its exploration programme. The new owner would process Red Gully gas under a tolling arrangement.

EGO has experienced a corporate upheaval in the past 12 months, with most of its directors replaced, legal stoushes within the Company, with shareholders and a joint-venture partner, accompanied by cost and schedule overruns, commissioning issues at the Gas Plant and a rapid production decline in one of the production reservoirs.

These issues have drained capital and hindered EGO's ability to further unlock the value of the Red Gully Project and the prospective acreage surrounding the Gas Plant.

Although the new management has made significant progress to date in improving the Red Gully Project performance, they still face massive challenges in turning the Company around. However, they have a better chance of addressing these challenges having brought in executives who have more appropriate skill sets and experience.

Farm-outs and achieving a reasonable price for the Gas Plant may provide price catalysts in the interim.

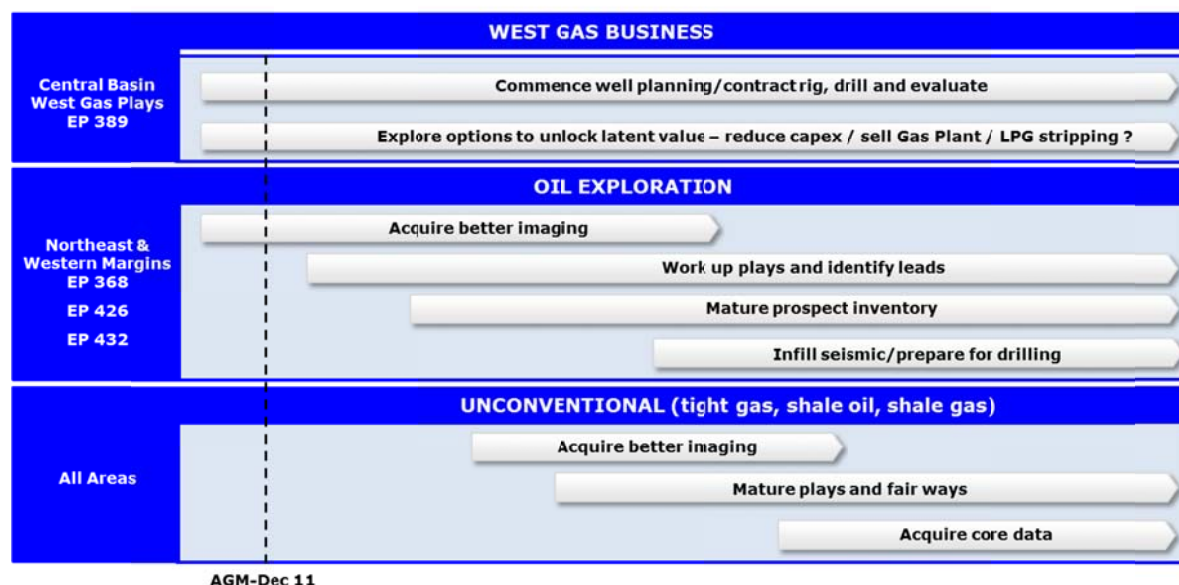
### EGO Strategy

The new management team's strategic objective is to unlock the value of its extensive Perth Basin acreage holding through successful exploration and the continued production of gas and condensate from the Gas Plant.

To achieve its strategic objectives, management is planning to recapitalise the Company and undertake the following activities:

- Investigate the option of selling the Gas Plant to raise funds for its exploration program.
- Drill one well within the next 18 months in the EP 389 permit.
- Plan seismic or other sub-surface imaging on EGO's exploration permits to identify future drilling opportunities.
- Drill a further 2-3 exploration wells in the next two years on high-graded opportunities in the other tenements.
- To recapitalise the Company, management is currently embarking on a two-stage process. Stage one involves buying out ERM Power Ltd (ERM), EGO's joint-venture partner and current largest shareholder (9.51%), to take full ownership of its permits and the Red Gully Project. The second stage will involve securing high quality farm-in partners (EGO had a bad experience with one of the joint venture partners who defaulted on its obligations) and corporate investors to fund an aggressive exploration campaign across its acreage. The Company believes that owning 100%, or as much as possible of its permits, can maximise the attractiveness of these permits to the best possible farm-in partners.

Figure 1: EGO forward activity plan – 2014/2015



Source: Empire Oil and Gas

### Stage One - Recapitalisation

On 1 September 2014 EGO reached an agreement with ERM for EGO to purchase ERM's interest in EP 389 including the Red Gully Project and seven Perth Basin permits for \$16.34m which was subsequently reduced to \$15.1m. Following this acquisition, EGO will have 100% ownership of 10 of 12 Perth Basin permits, the Red Gully Project and c.80% of another two permits. EGO will control more than 12,000km<sup>2</sup>, making it the largest acreage holder in the highly prospective onshore Perth Basin.

The purchase is to be funded via an interest free loan from ERM repayable at the earliest of the disposal of the Gas Plant or 31 August 2016, or earlier if EGO provides 120 days notice to repay the loan. While the loan is outstanding, ERM may receive a top-up payment on the purchase based on gains in the EGO's share price. The top-up payment will escalate 70% of the percentage increase in EGO's share price. The top-up mechanism will cease on repayment of the loan. EGO will offer all its shareholders the opportunity to participate in a proposed rights issue, on the same terms as the share placement, to raise up to \$10m.

EGO intends to raise \$7.5m from ERM through a combination of a share placement and right issue. The placement is to be at 12.5% discount to EGO's 10 VWAP immediately prior to shareholder approval.

The transaction is subject to shareholder, regulatory and contractual approvals.

We note that:

1. KPMG Financial Advisory Services Australia (KPMG) was commissioned by EGO's Independent Directors to provide an Independent Expert's Report (IER) opinion that the transaction is fair and reasonable to the shareholders of EGO. EGO also engaged RISC Operations (RISC) to act as an independent technical specialist to assist KPMG in preparing its valuation of ERM's assets. The IER has concluded that the transaction taken as a whole is fair, with the market value of the assets to be acquired by EGO from ERM are in range of \$14.8m to \$21.9m.
2. In order to achieve a full \$7.5m share placement and rights issue from ERM without exceeding the 19.99% shareholding cap, EGO's 10 VWAP must be at least \$0.007 a share and 100% take up of the \$10m retail rights issue must be achieved.
3. ERM stands to receive a "top-up" payment to the purchase price linked to any increase in EGO's share price while the initial interest free loan is outstanding.

4. The original purchase price of \$16.34m is similar to ERM's book-value of its Gas Assets of \$16.31m as reported in ERM's 2014 Annual Report.

## Production

EGO is currently producing an average of c.8TJ/d of gas and c.360 bbls/d of condensate from the Red Gully Project.

All gas is currently being sold to Alcoa under Tranche-1 of the GSA, as part of the \$25m pre-payment which helped fund the construction of the Gas Plant.

All condensate is being sold to the BP Kwinana refinery. This condensate revenue is currently EGO's only source of income.

## Reserves and Resources Position

The current reserves and resources have been independently assessed by RISC as a part of the IER. The current 2P (Proved and Probable) reserves, as reported in the IER, were 11PJ of gas and 0.504 mmbbls of condensate.

Figure 2: EP 389 – Reserves as at 1 October 2014

		EP 389 Joint Venture			EGO (net @ 76.39%)		
		1P	2P	3P	1P	2P	3P
<b>Red Gully</b>	Sales Gas (PJ)	7.0	10.8	15.7	5.3	8.3	12.0
	Condensate (kBBL)	316.7	494.0	716.5	241.9	377.4	547.3
<b>Gingin West</b>	Sales Gas (PJ)	0.01	0.2	0.3	0.0	0.2	0.2
	Condensate (kBBL)	0.5	10.4	15.6	0.1	7.9	11.9
<b>Total</b>	<b>Gas (PF)</b>	<b>7.01</b>	<b>11.0</b>	<b>16.0</b>	<b>5.5</b>	<b>10.7</b>	<b>17.0</b>
	<b>Condensate (kBBL)</b>	<b>317.2</b>	<b>504.4</b>	<b>732.1</b>	<b>242.3</b>	<b>385.3</b>	<b>559.3</b>

Source: Empire Oil and Gas' IER

2C resources, which were also assessed by RISC, were 22.3PJ of gas and 0.611mmbbls of condensates. 2C resources comprise of the Red Gully-1 D-sand which was shut-in in June 2014; the Gingin field which was discovered in 1964-1965 and the Gingin East field which was discovered in 1965-1966.

Figure 3: EP 389 – Contingent Resources as at 1 October 2014

		EP 389 Joint Venture			EGO (net @ 76.39%)		
		1C	2C	3C	1C	2C	3C
<b>Red Gully</b>	Sales Gas (PJ)	0.25	3.07	6.21	0.2	2.3	4.7
	Condensate (kBBL)	11.4	140.7	283.9	8.7	107.5	216.9
<b>Gingin</b>	Sales Gas (PJ)	5.8	11.7	21.4	4.4	8.9	16.3
	Condensate (kBBL)	60.0	140.0	260.0	45.8	106.9	198.6
<b>Gingin East</b>	Sales Gas (PJ)	3.7	7.5	13.6	2.8	5.7	10.4
	Condensate (kBBL)	170	330	610	130	252	466
<b>Total</b>	<b>Gas (PF)</b>	<b>9.8</b>	<b>22.3</b>	<b>41.2</b>	<b>7.4</b>	<b>17.0</b>	<b>31.5</b>
	<b>Condensate (kBBL)</b>	<b>241.4</b>	<b>610.7</b>	<b>1,153.9</b>	<b>184.4</b>	<b>466.5</b>	<b>881.5</b>

Source: Empire Oil and Gas' IER

In addition, EGO has also identified two drill-ready prospects within a short tie-back distance of the Gas Plant, following the Wannamal 3D Heli-seismic Survey that was conducted in April-June 2013. The 3D seismic was designed to delineate drilling prospects adjacent to the Gas Plant to provide

additional gas and condensate reserves. If these prospects were drilled and produced in line with their resource estimates, they would significantly increase the economics of the Gas Plant.

Figure 4: EP 389 – Prospective Resources

Prospect		EP 389 Joint Venture			EGO (net @ 76.39%)		
		Prospective Resources			Prospective Resources		
		Low est.	Best est.	High est.	Low est.	Best est.	High est.
Bootine Deep	Gas (PJ)	6.5	11.2	18.4	5.0	8.6	14.1
	Condensate (kBBL)	380	670	1,130	290	512	863
Wannamal	Gas (PJ)	3.0	6.1	11.9	2.3	4.7	9.1
	Condensate (kBBL)	170	360	730	130	275	558

Source: Empire Oil and Gas' IER

EGO had delivered c.2,500TJ of the total 15,000TJ of gas to Alcoa by the end of August 2014. The current 2P reserves of 11,000TJ (11.0PJ) is short of the 12,500TJ of the remaining commitment to Alcoa. However, the 2C resources of 22,300TJ (22.3PJ) should cover the remaining of the contract commitment and beyond, subjected to commercially successful production drilling.

## EGO Valuation

Figure 5 below shows our risked sum-of-the-parts valuation of EGO. This underpins our A\$0.012 price target. The valuation consists of 4 parts:

1. Red Gully Project comprises of the Red Gully Gas & Condensate Processing Plant and the currently producing fields, namely Gingin West-1 and Red Gully-1 fields;
2. Risked valuation of the 2C resources and identified prospects within EP-389 permit;
3. Exploration assets;
4. Net cash position.

Figure 5: Sum of Parts Valuation

Asset	EP 389 JV – NPV Risked (A\$m)	EGO Net NPV Risked (A\$m)	NPV ps Risked
<b>EP-389 and Red Gully Project</b>			
Red Gully Project	39.2	29.9	0.005
Contingent Resources	13.5	10.3	0.002
Bootine Deep Prospect	5.6	4.2	0.001
Wannamal Prospect	15.8	12.1	0.002
<b>Exploration Assets</b>		17.8	0.003
<b>Total Asset Valuation</b>	<b>74</b>	<b>74.3</b>	<b>0.012</b>
Cash		1.9	0.0003
Debt		2.2	0.0003
<b>Total Enterprise Value</b>		<b>100.5</b>	<b>0.012</b>

Source: Patersons Estimates

## Valuation Assumptions

### EP 389 and the Red Gully Project

- **Red Gully Project** – Based on the current 2P reserves of 11PJ, our discounted cash flow valuation is \$39.2m gross or \$29.9m net to EGO or \$0.005 per share.
- **Contingent resources prospects** – We have assumed a value of \$5.0/boe of resources, a well cost \$10m and a 50 percent chance of success.
- **Identified drilling prospects** – We have assumed a value of \$5.0/boe of resources, a well cost \$10m and a 20 percent chance of success.

Our gross valuation of EP-389 and the Red Gully Project totals to \$74.0m which is near the high end of KPMG's market valuation as show in table 6.

Figure 6: KPMG' EP 389 and Red Gully market valuation

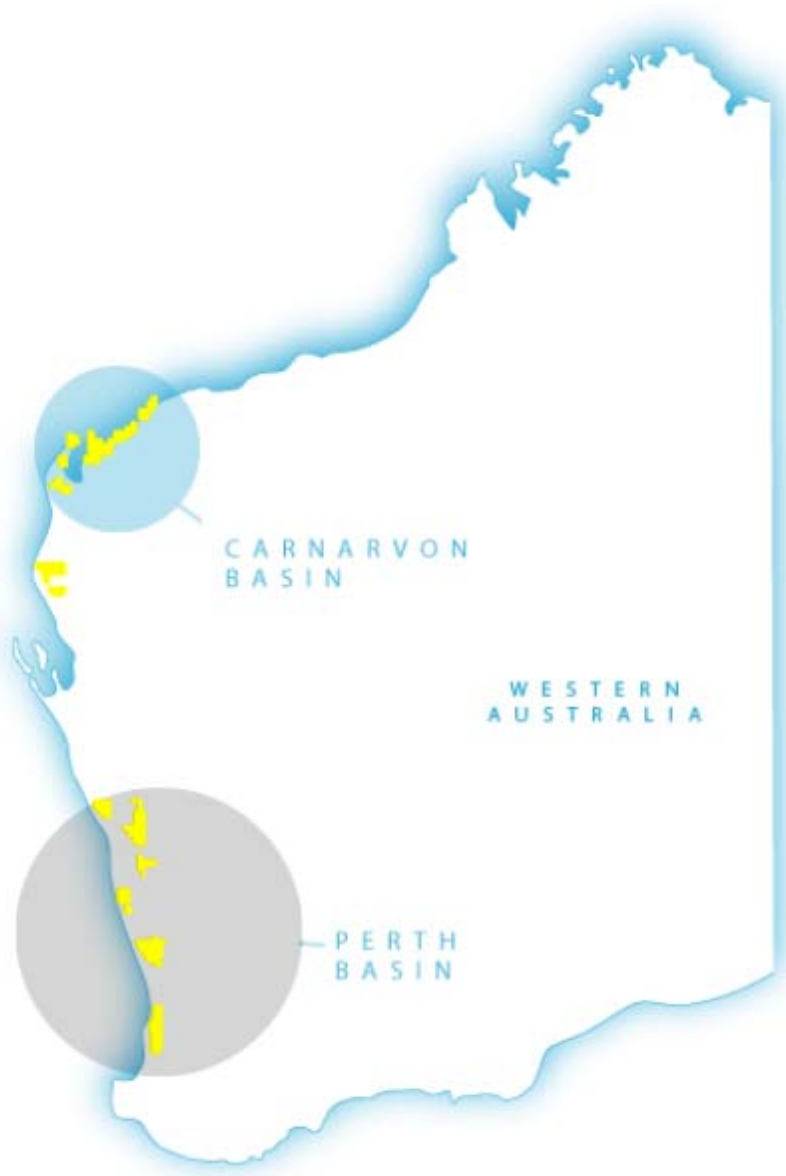
	Low	High
<b>ERM (23.61%)</b>	14.5	18.5
<b>EGO (76.39%)</b>	46.9	59.9
<b>Gross (100%)</b>	<b>61.4</b>	<b>78.4</b>

Source: Empire Oil & Gas' IER

**Exploration Assets** – Given the early exploration stage nature of these assets, we discounted EGO's year-end 2014 reported exploration commitments to arrive at the current risked value.

## PROJECTS

Figure 7: Oil and Gas Exploration permits and prospects



Source: Empire Oil and Gas



## Perth Basin

Figure 8: Perth Basin



Source: Empire Oil and Gas



The Perth Basin is a north to northwest-trending sedimentary basin extending about 1,300 km along the south-western coast of Western Australia extending from Geraldton to Augusta and covers an area of 172,300 km<sup>2</sup> and includes both offshore and onshore basins.

Many structures in the Perth Basin were initiated during a period of Early Permian extension, and were reactivated by Early Cretaceous trans-tension during the continental breakup of Australia and India. The Early Cretaceous breakup resulted in horizontal displacements, wrench-induced anticlines, and extensive faulting.

The main sources for oil are the marine Lower Triassic basal Kockatea Shale, with reservoirs in Lower Triassic and Permian sandstones; and Early Jurassic lacustrine shales in the Cattamarra Coal Measures, with reservoirs in Early Jurassic Fluvial Sandstones.

The main source for gas is the Permian Irwin River Coal Measures, with reservoirs in the Upper Permian and Jurassic strata. Analysis of Petroleum systems indicate that mature source rocks are widespread, reservoirs are abundant, and that structures are generally well timed for hydrocarbon entrapment throughout most of the Perth Basin.

At least 15 commercial hydrocarbon fields have been discovered in the Northern Perth Basin. Approximately 280 wells have since been drilled and concentrated in the onshore part of the basin opposed to the 42 offshore wells. There are 28 oil producers and 42 gas producers with the majority of the known hydrocarbon accumulations in the northern part of the Basin. There are many untested hydrocarbon prospects in the Perth Basin. The logistics and economics of potential oil and gas discoveries are very positive, particularly since the deregulation of Western Australia gas markets in 1988.

Figure 9: Perth basin

Permit No.	Permit Holders	Equity Held
EP389	Empire Oil and Gas	76.39%
	ERM**	23.61%
EP426	Empire Oil and Gas	42.22%
	Allied Oil and Gas**	10.00%
	ERM*	27.78%
	Norwest Energy	20.00%
EP368	Empire Oil and Gas	80.00%
	North West Energy	20.00%
EP432	Empire Oil and Gas	77.50%
	Allied Oil and Gas*	10.00%
	ERM*	12.50%
EP416	Empire Oil and Gas	85.00%
	Allied Oil and Gas*	10.00%
	ERM*	5.00%
EP430	Empire Oil and Gas	100.00%
EP440	Empire Oil and Gas	87.50%
	ERM*	12.50%
EP454	Empire Oil and Gas	50.00%
	ERM*	50.00%
EP479	Empire Oil and Gas	100.00%
EP480	Empire Oil and Gas	40.00%
	ERM*	60.00%

Source: Empire Oil and Gas

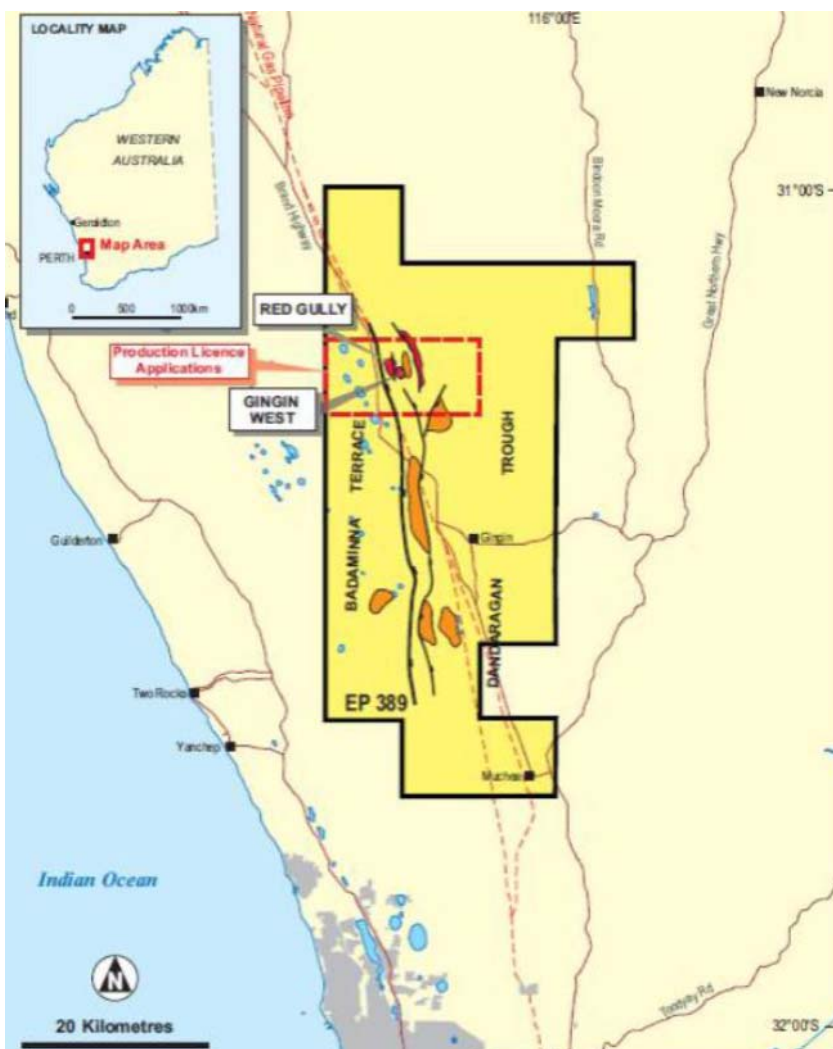
\* Will be acquired by EGO

\*\* Deemed to have withdrawn from JV

**EP 389**

EP 389 is located at the southern end of the North Perth Basin. EGO holds 76.39% working interest and is the operator.

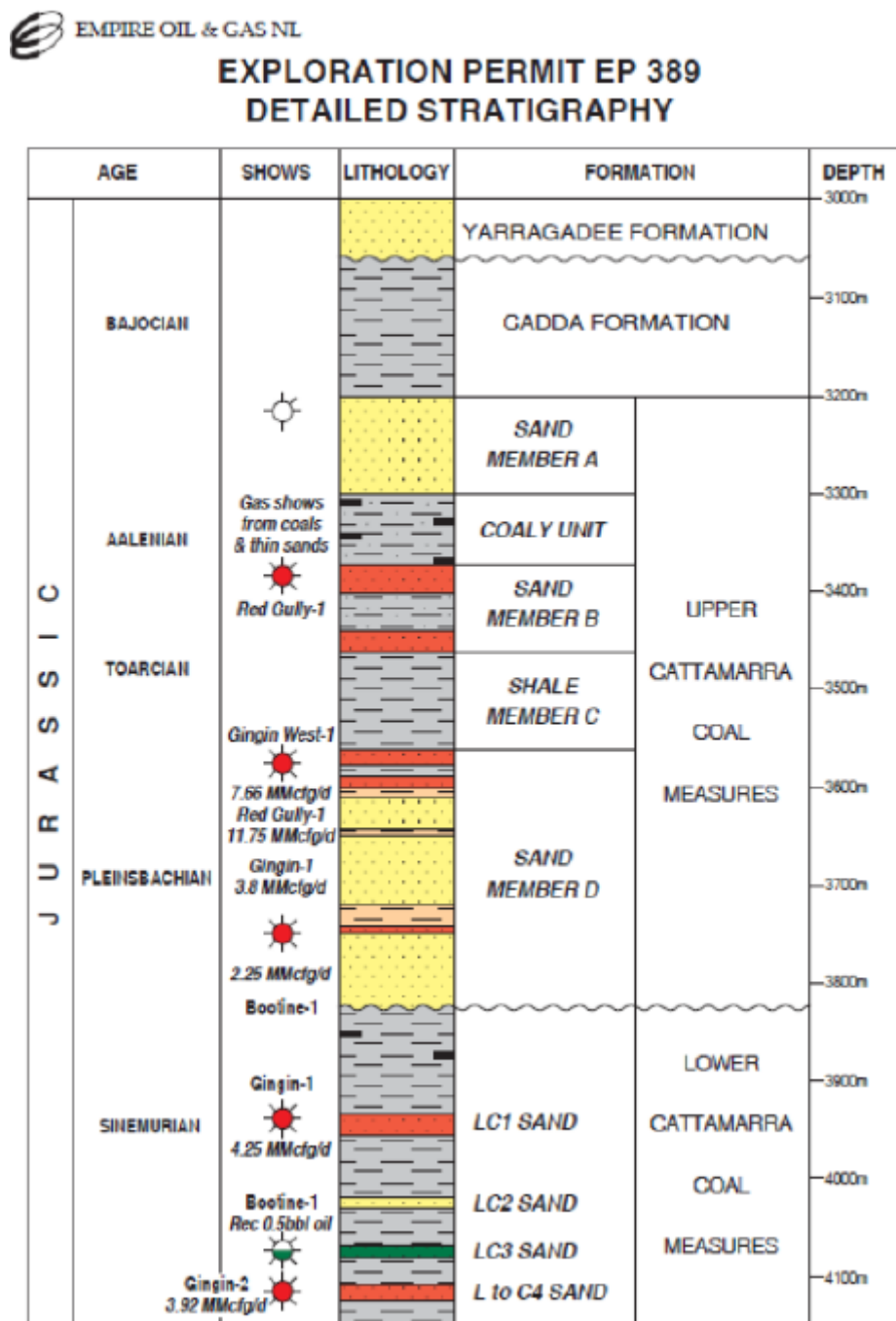
Figure 10: Permit 389



Source: Empire Oil and Gas

The EP 389 discoveries have been made in the Jurassic Cattamarra Coal Measures, a sand-rich coal bearing sequence where the reservoirs are fluviodeltaic sands sealed by intraformational shales.

Figure 11: EP 389 Stratigraphic Section



Source: Empire Oil and Gas

**Red Gully Gas and Condensate Processing Facility (Production Licence PL 96)**

Located on permit EP 389, the Red Gull Gas and Condensate Facility (Gas Plant) was the first dedicated gas and condensate rich processing facility constructed in the onshore Perth Basin to treat Jurassic aged gas. The Gas Plant was initially designed to treat up to 10 million cubic feet of gas per day (MMcf/d) and up to 500 barrels of condensate per day (bbl/d), however, there is provision for future expansion of the Gas Plant to process up to 20 MMcf/d of gas and 1,600 bbl/d of condensate.

A 3.2km export pipeline from the Facility is tied into the Dampier to Bunbury Natural Gas Pipeline (DBNGP) where EGO has established a 20-year agreement.

The Gas Plant is currently fed with production from the Red Gully -1 and Gingin West -1 wells.

The Gas Plant produced first gas in June 2013 and was commissioned in September 2013. The total construction cost was \$39m which was significantly over the original \$21.6m budget.

All gas from the Facility is sold to Alcoa under the long term GSA and condensate is sold to BP's Refinery Kwinana.

### **Red Gully – 1**

Discovered in December 2009 on permit EP 389, Red Gully – 1 is situated in the Dandaragan Trough in the central and eastern part of the onshore Perth Basin. The Red Gully-1 well intersected three hydrocarbon intervals; the D sand, B sand and the Coaly Unit (all in the Cattamarra Coal Measures). The D and B sands were completed for production, but only the D sand was tested. A dual completion was run in the well for the D and B Sands. The D sand was perforated with tubing conveyed perforating guns and flowed on production test at a stabilised rate of 12MMcf/d of gas and 832 bbl/d of condensate over a five day test. A completion was also run to perforate the B sand with through tubing perforation guns at a later date.

Following significant drop in D sands flowing wellhead pressure and gas production in the March 2014 quarter, which indicated a lower reserve recovery than initially anticipated, the new EGO management decided to perforate and production test the B sand. B sand is estimated to contain a larger gas accumulation than D sand.

EGO reported after approximately three months of production tested via the Gas Plant, the production performance of the B sand has been encouraging, produced approximately 8TJ per day, meeting the maximum nominations of the GSA. During the maintenance shutdown in early October 2014, EGO ran a pressure survey which formed a part of the data package required for an independent reserves assessment which was performed by RISC. The B sand has produced 0.651BCF of gas and c.33,000bbls of condensate up to 1<sup>st</sup> of October 2014.

### **Gingin West – 1**

Followed Red Gully – 1 discovery, Gingin West – 1 was discovered in 2011. Gingin West – 1 is located in the Dandaragan Trough in the central and eastern part of the onshore Perth Basin. The well had a test flow rate of 7.5MMcf of gas per day and 375 bbl/d of condensate per day over a four day test.

The well is currently shut while priority is being given to the Red Gully production and has produced 0.289 BCF and 12,900bbls of condensate.

### **Gingin Field**

Gingin Field is located north of the Gas Plant and was drilled by the Gingin-1 well in 1964-1965. The well discovered gas in several reservoirs within the Cattamarra Coal Measures and was placed on production from March to December 1972 and June 1975 to January 1976. However, produced volumes are limited and the reservoir interval produced is unknown.

### **Gingin East Discovery**

Gingin-2 well was drilled in 1965-1966. The well encountered gas in the D sands, which was tested at low flow rates. The LC 4 and LC 5 sands were tested

### **Exploration**

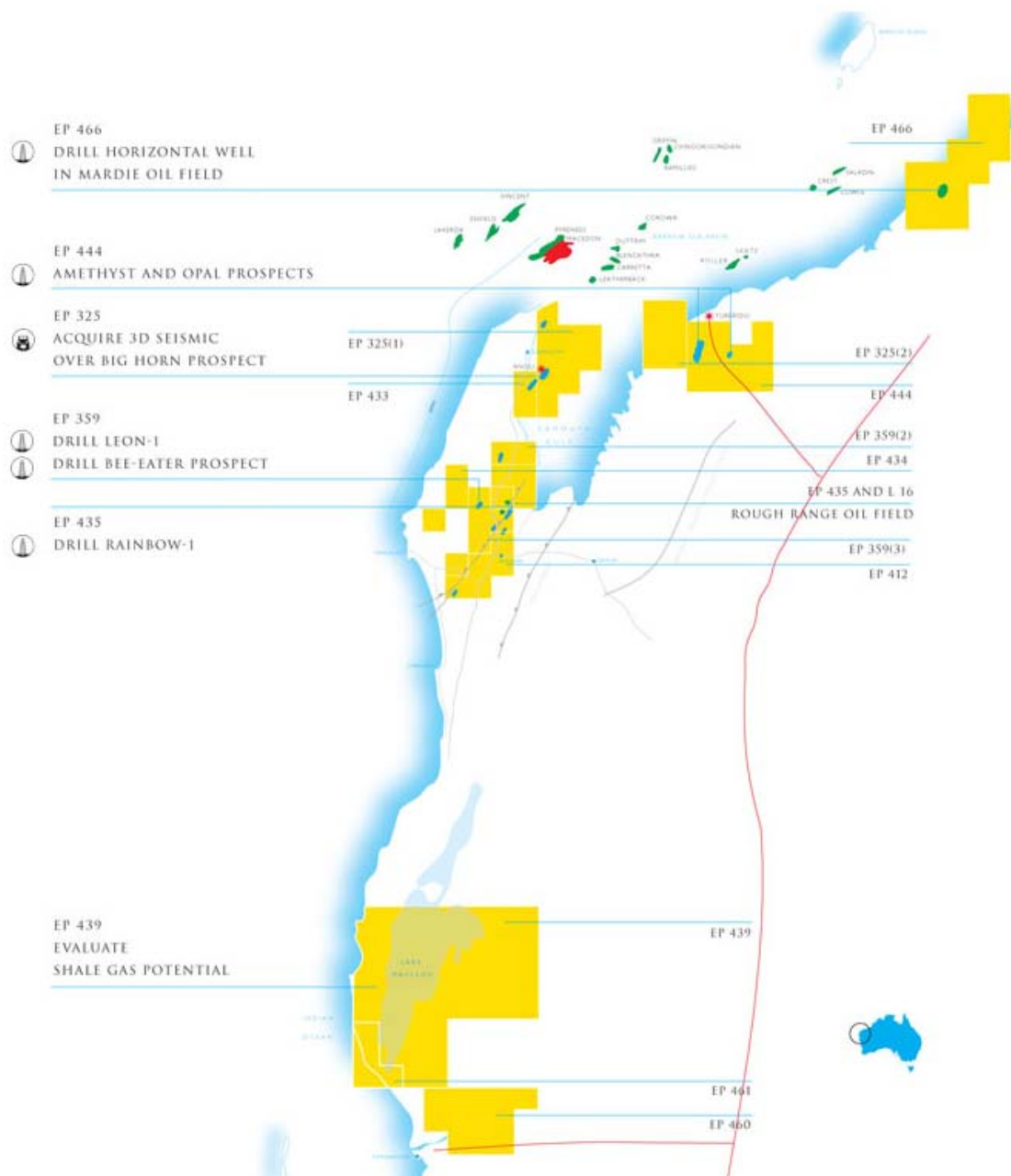
EP 389 permit contains two mature prospects in the Red Gully / Gingin area that are being considered for drilling.

- Bootine Deep Prospect lies underneath the Red Gully field. It was partially drilled by the Bootinie-1 well, which encounter gas shows in the LC2 reservoir and good gas shows in the LC 3 reservoir. The LC 3 reservoir was tested, but the DST failed, however some gas cut mud was recovered giving encouragement to form a prospect with these reservoirs.
- Wannamal Prospect is located between and slightly south of the Red Gully field and the Gingin East discovery.

## Carnarvon Basin

Ego is currently in the process of divesting its acreage in the Carnarvon Basin. On 20 November 2014, EGO announced that the Company has entered an indicative agreement to sell its subsidiary company, Rough Range Oil Pty Ltd that holds its six remaining Carnarvon Basin tenements to Bounty Oil & Gas (ASX: BUY) for small cash sum and royalty based payment on future production.

Figure 12: Carnarvon Basin - Overview



Source: Empire Oil and Gas

The Carnarvon Basin is described as an epicratonic, faulted and folded Phanerozoic Basin, which encompasses over 1,000 km of the west and northwest coast of Western Australia, from Geraldton to north of Port Hedland. The onshore part of the Carnarvon Basin covers about 115,000 km<sup>2</sup> and the offshore part covers approximately 535,000 Km<sup>2</sup> with water depths up to 3,500 metres.

The Northern Carnarvon Basin is dominated by a southwest-trending set of troughs, these being the Exmouth, Barrow, Dampier, and Beagle Sub-basins. These are the major Mesozoic depocentres of the southern North West Shelf, containing up to 15 km of Mesozoic sedimentary rocks.

The Southern Carnarvon Basin is elongated north–south and is composed of two principal structural elements: the Gascoyne Platform to the west, and the Merlinleigh and Byro Sub-basins to the east.

To date, 75 onshore, including 57 stratigraphic tests and two offshore wells have been drilled in the Southern Carnarvon Basin. The numerous oilfields and gasfields of the Northern Carnarvon Basin demonstrate the petroleum potential of the region and sub-basin margins such as the Peedamullah Shelf, Rankin Trend, Exmouth Gulf, and the sub-basin axes possibly hold the key other major portions of undiscovered reserves.

Figure 13: Carnarvon Basin

Permit No.	Permit Holders	Equity Held
EP435	Empire Oil and Gas	90%
	Bounty Oil and Gas	10%
EP412	Empire Oil and Gas	35%
	Bounty Oil and Gas	65%
EP359	Empire Oil and Gas	77%
	Pace Petroleum	3%
	Bounty Oil and Gas	10%
	Phoenix Resources	10%
EP444	Empire Oil and Gas	100%
EP439	Empire Oil and Gas	69%
	Longreach Oil	11%
	Jurassica Oil	10%
	Indogo Oil	6%
	Falcore	3%
	Vigilant	1%
	EP325	Empire Oil and Gas
EP433	Strike Oil	45%
	Cott Oil and Gas	11%
	Advent Energy	8%
	Empire Oil and Gas	89%
EP434	Pace Petroleum	11%
	Empire Oil and Gas	90%
EP466	Pace Petroleum	10%
	Empire Oil and Gas	100%

Source: Empire Oil and Gas

Figure 14: Carnarvon Basin Discoveries

Permit	Name	Description
EP 435 & L16	Rough Range-1B	Discovery Wells
	Rough Range-1B Oil Production Facility	Production Facility

Source: Empire Oil and Gas

### Rough Range - 1B

Located on permit EP435, Rough Range – 1B is located in the onshore Carnarvon Basin and is situated along the Rough Range Anticline and Paterson Trough. The main objective in EP 435 is the Early Cretaceous Birdrong Sandstone. The original oil-in-place for the Rough Range Oilfield is



estimated to be 409,000 barrels. Over the years, there have been seven appraisal wells drilled around the field, however, due to large velocity variations in the overlying Tertiary limestones, depth conversion of the seismic time maps has proved very difficult. While connected to the Rough Range 1B Oil Production Facility, Rough Range – 1B is shut in pending maintenance and further oil discoveries nearby.

### Rough Range 1B Oil Production Facility (Production Licence L16)

Located on permit EP435, Rough Range 1B Oil Production Facility was commissioned in July 2005 with and oil production of 522 boe/d. The Facility was considered innovative and was designed for a remote area and the high paraffin crude type from the Rough Range - 1B well. The use of an artificial lift was designed to minimise water 'coning' and enable the production of the estimated recoverable oil reserve of 250,000+ barrels of oil. By 2007, the Facility had sold more than 30,733 barrels of oil to BP, however in December 2007, the decision was made to shut the Rough Range well in and take a series of shut-in pressure readings until the grant of a production licence. It was not until August 2010 that Production Licence L16 was granted, however, we note that the production facility is still currently shut for care and maintenance until further oil discoveries.

## CORPORATE AND FINANCE

As at the end of June 2014, EGO has \$1.9m cash in bank and a total of \$2.2m in interest breaking liabilities. ERM had provided EGO with a \$3.75m credit facility on commercial terms secured by a second-ranking charge over the EGO's property. At the end of June 2014, a total of \$2m of this facility had been drawn.

Figure 15: Top 20 Shareholders

Name of Shareholder	No. of Shares	%
ERM Power Limited	598,751,855	9.51
Citicorp Nominees Pty Limited	127,031,802	2.02
UBS Wealth Management Australia Nominees Pty Ltd	82,701,524	1.31
Mr RA Hutchfield	76,846,446	1.22
Mr PF Vincent and Mrs JA Vincent	65,690,890	1.04
Mr JG Pearce and Mrs PJ Pearce	58,744,887	0.93
BNP Paribas Noms Pty Ltd	40,000,000	0.64
Less James Nominees Pty Ltd	35,000,000	0.56
Mr GJ Shearer & Mrs EJ Shearer	33,740,890	0.54
Upora Pty Ltd	33,333,334	0.53
Sunset Power Holdings Pty Ltd	31,111,112	0.49
Dr Cong Khanh Huynh	31,000,000	0.49
Mr EA Bond & Mrs QL Bond	28,000,000	0.44
Mr RD Shield	28,000,000	0.44
Peard Developments Pty Ltd	27,670,123	0.44
HSBC Custody Nominees Limited	24,672,845	0.39
GMT Services Pty Ltd	24,618,418	0.39
Mr GM Thompson & Mrs AM Thompson	23,351,112	0.37
Mr F Togliatto	23,169,791	0.37
Peard Developments Pty Ltd	23,100,000	0.37
Wextar Pty Ltd	22,480,000	0.36
	1,439,015,029	22.86
<b>Total Shares</b>	<b>6,294,307,442</b>	

Source: Empire Oil and Gas

## DIRECTOR AND MANAGEMENT PROFILES

### **Antonino Mario (Tony) Iannello – Chairman and Non-Executive Director**

Tony was appointed as a director on 22 November 2013, bringing to the business more than 30 years of banking and energy experience.

He is the Non-Executive Chairman of HBF Health Ltd, MG Kailis Group, and D'Orsogna Ltd. He is a director of the St Baker Wilkes Indigenous Educational Foundation Limited, Water Corporation of Western Australia, and a member of The Murdoch University Senate. Prior to embarking on a career as a non-executive director, Tony was the Managing Director of Western Power Corporation until its separation into four separate businesses. Previously he held a number of senior executive positions at BankWest.

Other listed company directorships in the last three years:

- ERM Power Limited since July 2010
- Energia Minerals Limited since March 2010
- SP Ausnet\* since June 2006
- Aviva Corporation Limited (February 2008 – November 2010)

\*The SP Ausnet “stapled group” of companies comprises SP Australia Networks (Distribution) Ltd, SP Australia Networks (Transmission) Ltd & SP Australia Networks (Finance) Trust.

### **James Brett Lochran (Brett) Heading – Independent Non-Executive Director**

Brett was appointed a director on 22 November 2013 bringing extensive experience as a corporate lawyer and company director.

Brett has specialised in corporate law for 25 years, including mergers and acquisitions, capital raising, ASX listings and advising boards of listed and unlisted public companies and government-owned corporations. He has been a partner of McCullough Robertson Lawyers since 1985 and was appointed Chairman of Partners in 2004.

Brett has been a director of the listed companies shown below and a number of unlisted companies. He has also held roles on Federal Government boards, having been a longstanding member of the Takeovers Panel (1998 to 2009) and the Board of Taxation (2000 to 2009).

Other listed company directorships in the last three years:

- ERM Power Limited (October 2010 - December 2013)
- Invion Limited since February 2012
- Trinity Limited since August 2009
- ChemGenex Pharmaceuticals Limited (June 2002 – July 2011)

### **Stuart Anthony Brown – Independent Non-Executive Director**

Mr Brown is a petroleum geologist with over 30 years' experience in Australia and internationally at the technical, managerial, executive and board levels.

Mr Brown held the position of Vice-President Strategic Planning at Woodside from 2007 until 2012. In this role he was responsible for the management of Woodside's corporate strategic planning, including the overview of the company's investment decisions and investment reviews and reported to the CEO and Board.

Mr Brown is currently the Managing Director of his own privately-owned petroleum consultancy, International Oil & Gas Strategies Pty Ltd.

His other roles have included International Business Development Manager, New Ventures Strategy and Planning Manager at Woodside and Regional Business Advisor at Shell International Exploration & Production. Mr Brown has also held senior strategic and exploration positions at Shell in the UK, Africa and the Middle East.

Mr Brown is also a Non-Executive Director of WHL Energy Ltd (Dec 2013 – Present).

### **Ken Aitken – Chief Executive Officer**

Mr Aitken has extensive knowledge of WA's oil and gas industry through his senior roles with Origin, Mitsui, Apache and New Standard Energy as well as international experience in Norway, UK and Indonesia.

Mr Aitken was General Manager Operations and Engineering with ASX-listed petroleum company New Standard Energy with responsibility for managing all operated asset activities with joint venture partners Conoco Phillips and Petrochina.

Prior to this, Mr Aitken held the position of WA Business Unit Manager/Asset Manager with Origin Energy for a total of seven years, during this time he managed production of approximately three million barrels of oil and 20PJ of gas. During his tenure, Origin discovered and developed the significant Redback gas field, located in the onshore Perth Basin.

### **Kent Quinlan – Company Secretary**

Mr Quinlan is on secondment to EGO from ERM Power, where he holds the position of Chief Financial Officer at the Company's Gas Business Unit. He is also a senior member of ERM Power's executive management team and participates in strategic planning matters for the Group.

Mr Quinlan, who holds a Bachelor of Commerce and an MBA from the University of Queensland, has worked in Queensland's energy and resources sectors for nearly 25 years. He specialises in financial and strategic planning, analysis and interpretation of business performance and the integration of financial and business management systems, particularly in the energy sector.

Mr Quinlan was previously the Manager of Strategic Planning for Queensland Gas Company (QGC) and has held financial management roles with Energex Retail, Origin Energy, SANTOS and Mount Isa Mines.

## Investment Risks

The key investment risks for EGO include:

Commitment risk – a number of its assets require minimum commitment such as exploration, drilling, production to keep. A component of EGO's strategy is to seek out farm-inees for the Perth Basin permits and to sell down part or all of its Carnarvon Basin permits. Each of these permits have a minimum level of work commitments, which include the drilling of an exploration well. If EGO is unable to secure a farm-inee for one or more of these, then it will risk losing the permit(s).

Geological risk – the actual production characteristics of an oil reservoir may differ significantly from initial interpretations and expectations.

Timing risk – the ability of EGO to secure quality drilling and completion services in a timely and cost effective manner can lead to cost and time over-runs.

Capital expenditure & operating risk – the risk that capital and or operating costs exceed budget and/or exhaust available funding due to unforeseen circumstances before project completion and before further exploration drilling, and reduce the profitability and free cash generation of the project.

Commodity Price and Exchange Rate risk – as with most oil and gas exploration companies, commodity price and exchange rate risk should also be considered.

Liquidity Risk – the ability of EGO to pay its coupon and interest from its cash generation.

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